

ABSTRACT

A method of providing a group call service in a radio network is provided. A BS, which does not cover a GCA but is located in a radio network near to the GCA, generates extended group call service information including information about BSs that cover an NGCA and broadcasts the extended group call service information. Upon receipt of the extended group call service information, an MS selects a BS in the best service condition among BSs set in the extended group call service information as a BS from which to receive an extended group call service and receives group call paging information from the BS. The MS analyzes the group call paging information and decides whether the group call service is available from the BS. If the group call service is available, the MS registers and connects to the selected BS and receives the group call from the BS.